

## CLAIMS

I claim:

1. A method for determining the shock characteristic of a suspension having a fixed proximate portion, a cantilevered distal portion and a spring portion therebetween, including subjecting said suspension to a centrifugal force that differentially displaces said distal portion relative to said proximate portion, measuring the displacement of said distal portion under said centrifugal force, and determining said suspension shock characteristic from said displacement.

2. The method according to claim 1, including also fixing said suspension base portion to a rotatable structure for rotation therewith to provide said centrifugal force.

3. The method according to claim 1, including also maintaining a sensor opposite said distal portion, and sensing said displacement with said sensor to measure said displacement.

4. The method according to claim 1, including also engaging said distal portion with a sensor that senses said displacement.

5. The method according to claim 4, including also supporting said suspension of a rotatable structure, and carrying said sensor on said structure.

6. The method according to claim 1, including also supporting said suspension by said proximate portion on a rotatable structure in distal portion cantilevering relation, supporting a sensor on said structure in distal portion displacement sensing relation, and sensing displacement of said distal structure  
5 under centrifugal force generated by rotation of said structure.

7. The method according to claim 1, including also subjecting a plurality of said suspensions to shock characteristic determination simultaneously.

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8. A method for determining the shock characteristic of a suspension having a proximate portion, a distal portion and a spring portion therebetween, and in which said shock characteristic is a function of the displacement of said distal portion relative to said proximate portion under shock load, including  
15 mounting said suspension proximate portion to a rotatable structure while maintaining said suspension distal portion cantilevered from said structure and arranged to be displaced from said structure under centrifugal force a distance that is a function of the suspension shock characteristic, sensing displacement of cantilevered distal portion of said suspension with a sensor that measures the  
20 distance of distal portion movement, and determining the suspension shock characteristic from said displacement measurement.

9. The method according to claim 8, including also mounting a sensor on said rotatable structure engaged with said distal portion for rotation with said structure in distal portion displacement sensing relation.

5 10. The method according to claim 8, including also mounting a plurality of said suspensions and sensors to said rotatable structure for simultaneous shock characteristic determination.

10 11. The method according to claim 8, including also engaging said sensor with said distal portion for displacement sensing.

12. Apparatus for determining the shock characteristic of a suspension having a fixed proximate portion, a cantilevered distal portion and a spring portion therebetween and in which displacement of said distal portion relative to  
15 said proximate portion under centrifugal force is a function of said shock characteristic, said apparatus comprising a rotatable structure that mounts said suspension by its said proximate portion for rotation therewith under centrifugal force, and a displacement sensor mounted to said rotatable structure in distal  
20 portion displacement sensing relation, said sensor sensing the displacement of said distal portion under said centrifugal force.

13. The apparatus according to claim 12, in which said suspension base portion is fixed to said rotatable structure for rotation therewith.

14. The apparatus according to claim 12, in which said sensor engages said distal portion in displacement sensing relation.

5 15. The apparatus according to claim 12, in which said sensor is carried on said rotatable structure.

16. The apparatus according to claim 12, in which said suspension is supported by said proximate portion fixed on said rotatable structure in distal  
10 portion cantilevering relation, said sensor is fixed on said rotatable structure arranged to sense displacement of said distal portion under centrifugal force generated by rotation of said structure.

17. The apparatus according to claim 12, in which plurality of said  
15 suspensions is carried on said rotatable structure for shock characteristic determination simultaneously.

18. An apparatus for determining the shock characteristic of a suspension having a proximate portion, a distal portion and a spring portion  
20 therebetween, said apparatus comprising a rotatable structure having a mount for said suspension base portion such that said distal portion is cantilevered over said rotatable structure, and a sensor carried on said rotatable structure for sensing the displacement of said distal portion relative to said proximate portion

under shock load from centrifugal force imparted to said suspension from said rotatable structure.

19. The apparatus according to claim 18, in which said rotatable  
5 structure has a plurality of said mounts for mounting a plurality of said suspensions to said rotatable structure.